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(54) Title: CATHEPSIN CYSTEINE PROTEASE INHIBITORS

(57) Abstract: The present invention relates to a novel class of compounds mainly, leucinamide-amino-carboxylate derivatives of formula (I) wherein Y is CR¹R², O, S, -SO₂, C=O or NR⁹; Z is CR¹R², O, S, -SO₂, C=O or NR⁹ and each G is independently a CR¹CR². Said compounds are cathepsin cysteine protease inhibitors, including but not limited to, inhibitors of cathepsin K, L, S and B and to pharmaceutical compositions thereof. These compounds are useful for treating and preventing cathepsin dependent conditions in which inhibition of bone resorption is indicated, such as osteoporosis.